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ABSTRACT

The Project RISE (Reading Individualized in Special Education) program undertaken by the Austin (Texas) Independent School District collected and analyzed data on the reading achievement of junior high school special education students. A random sample of 256 such students was given several measures of reading achievement. Demographic information that was gathered for the students included data on sex, IQ, ethnicity, free lunch status, nature of handicap, and type of teacher from whom reading instruction was received (regular or special education). The students were also classified according to the instructional arrangement as "resource" (those receiving at least one hour of special education instruction per day), "integrated" (those receiving more than three hours of such instruction per day), and "self-contained" (those receiving full-day special education service). The findings revealed that (1) resource students had higher reading achievement than integrated students, (2) minority students scored below Anglo students in reading achievement, (3) students who were not eligible for free lunch scored higher and made bigger gains than did students who were eligible, and (4) students who received reading instruction from special education teachers were generally lower in ability than those taught by regular teachers, but both groups made comparable gains. (EL)

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OFFICE OF RESEARCH AND EVALUATION
AUSTIN INDEPENDENT SCHOOL DISTRICT

INTERIM EVALUATION REPORT

PROJECT RISE:

READING ACHIEVEMENT IN AISD JUNIOR HIGH SPECIAL EDUCATION (1978-79)

May, 1980

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MAJOR FINDINGS

- Resource students (i.e., those who received at least 1 hour of Special Education instruction per day) had higher reading achievement levels than Integrated students (i.e., those who received more than 3 hours of Special Education instruction per day).

- Although the pupils who received reading instruction from Special Education teachers were generally lower in ability than those taught by regular reading teachers, both groups made comparable gains during the year.

- Male students made bigger gains in reading achievement during the year than did female students.

- Minority students scored below Anglos at the beginning of the year. By the end of the year this gap had widened.

- Students who were not eligible for free lunch scored higher and made bigger gains than students who were eligible for free lunch.

- Students classified as mentally retarded had the lowest reading achievement of any diagnostic category. Students classified as learning disabled had the largest discrepancy between instructional level and listening comprehension.

- The Wide Range Achievement Test (WRAT) is not a very sensitive indicator of change in reading achievement for the students tested.

What is Project RISE?

Project RISE (Reading Individualized in Special Education) is a Federally funded program with three major objectives:

- The first is to develop and implement a systematic program of individualized diagnostic-prescriptive reading instruction in several Austin junior highs.
- The second objective is to provide inservice training designed to improve the skills of junior high Special Education reading instructors.
- The third objective is to collect and analyze data on the reading achievement of AISD junior high Special Education students.

The first two objectives will be treated in some detail in an evaluation report which will be available in July, 1980. This interim report summarizes and interprets the reading achievement data collected by project RISE personnel during the 1978-79 school year.

What kind of information was collected?

A random sample of 256 AISD junior high Special Education students was selected in October, 1978. In November, 1978, and again in April the following year, these students were given several measures of reading achievement.

The tests administered were the word recognition subtest of the Wide Range Achievement Test (WRAT), and the McCracken Standard Reading Inventory. The McCracken yields two scores: an estimate of listening comprehension and an estimate of instructional reading level.

In addition, demographic data were collected from school records. This information included IQ, sex, ethnicity, free lunch status, handicapping condition, and type of teacher from whom reading instruction was received (i.e., regular or Special Education). In addition, students were classified according to instructional arrangement (i.e., Resource=those receiving at least 1 hour of Special Ed instruction per day; Integrated=those receiving more than 3 hours of Special Ed instruction per day; Self-Contained=those receiving full-day service).

What kinds of students were included in the sample?

The students tested may be described in terms of the following demographic characteristics:

- The sample contained more males (n=186) than females (n=70).

- Minority students (n=159) outnumbered Anglo students (n=93).

- The most frequently occurring diagnostic label was Learning Disabled (n=174), followed by Minimal Brain Injury (n=28)*, Mentally Retarded (n=23), Emotionally Disturbed (n=15), and Physically Handicapped (n=15).

- The number of students receiving free lunch (n=145) was almost equal to the number not receiving free lunch (n=109).

- The most common instructional arrangements were Resource (n=146) and Integrated (n=98). Only 11 students were in self-contained classrooms (these students were not included in subsequent analyses).

- Half the students in the sample were receiving reading instruction from regular classroom teachers; half from Special Education teachers.

Since the sample was randomly selected from the total population of AISD junior high Special Education students, it is assumed that the above demographic characteristics are representative of the total population.

*no longer used as a diagnostic category by AISD.

What was the reading achievement of Resource students compared to Integrated students?

Nov.	April		Nov.	April
4.8	5.6	listening comprehension	3.5	4.3
4.1	4.9	instructional level	2.6	3.0
4.5	4.7	WRAT	3.0	3.1
RESOURCE			INTEGRATED	

Figure 1: Mean grade equivalents for Resource and Integrated students.

Resource students scored significantly higher than Integrated students on all three measures.

However, although the Resource students gained 8 months in instructional level between November and April, the Integrated students only gained 4 months. Thus, the gap between these two groups widened as the year progressed.

What can we say about other characteristics of Resource students compared to Integrated students?

- Resource students had significantly higher IQ's than Integrated students.
- Integrated classes had a slightly higher percentage of minority students and students receiving free lunch than did Resource classes.
- Resource students were more likely to have LD labels; Integrated students were more likely to have MR or physically handicapped labels.

What was the reading achievement of students receiving reading instruction from regular teachers compared to those taught by Special Education teachers?

Regular Nov.	Regular April		Special Ed. Nov.	Special Ed. April
4.9	5.6	listening comprehension	3.6	4.5
4.2	4.9	instructional level	2.7	3.4
4.6	4.8	WRAT	3.1	3.3

Figure 2: Mean grade equivalents for students receiving reading instruction from regular and Special Education teachers.

The students taught by regular teachers scored significantly higher on all three measures (in both November and April) than the students taught by Special Education teachers.

However, the reading achievement (i.e., instructional level) scores of both groups increased by equal amounts over the course of the year.

Note that in both figures 1 and 2, WRAT scores show very little change between November and April in comparison to instructional level and listening comprehension scores.

What can we say about other characteristics of these two groups?

- Those students receiving reading instruction from regular teachers had significantly higher IQ's than those taught by Special Education teachers.
- The Special-Education-taught students were more likely to receive free lunch than the regular-taught students.

What was the reading achievement of minority students compared to Anglo students?

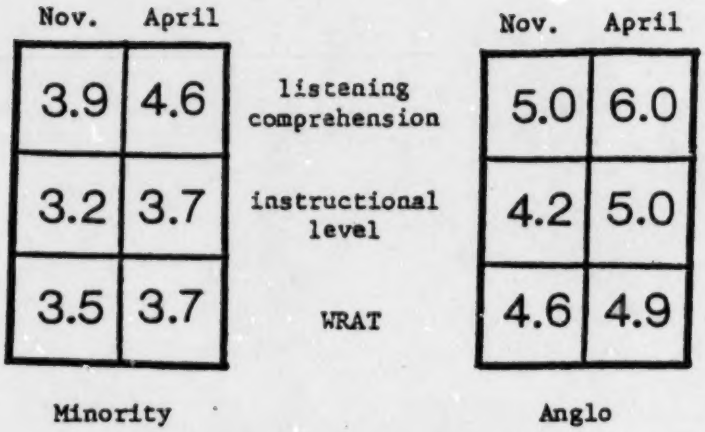

Figure 3: Mean grade equivalents for minority and Anglo students.

Initial analyses revealed no significant differences between the scores of Hispanic and Black students. Therefore, these two groups were combined to form the minority group.

The Anglo students scored significantly higher than the minority students on all three measures in both November and April.

In terms of instructional level, the Anglo students made significantly bigger gains (8 months) than did the minority students (5 months). Thus, the Anglo students' scores were higher than the minority students' scores at the beginning of the year; they were even further apart at the end of the year.

What was the reading achievement of students receiving free lunch (i.e., low SES) compared to students not eligible for free lunch?

Free Lunch Nov.	Free Lunch April		No Free Lunch Nov.	No Free Lunch April
3.9	4.7	listening comprehension	4.8	5.6
3.0	3.5	instructional level	4.2	5.0
3.4	3.6	WRAT	4.6	4.8

Figure 4: Mean grade equivalents for students receiving free lunch and those not eligible for free lunch.

Those students not eligible for free lunch scored significantly higher than students receiving free lunch on all three measures in both November and April.

In addition, students not receiving free lunch made bigger gains in instructional level. Thus, the gap between the instructional level scores of these two student groups widened as the year progressed.

What was the reading achievement of male students compared to female students?

Males Nov.	Males April		Females Nov.	Females April
4.3	5.3	listening comprehension	4.0	4.5
3.4	4.1	instructional level	3.6	4.1
3.8	4.0	WRAT	4.1	4.3

Figure 5: Mean grade equivalents for male and female students.

There were no significant differences between males and females on any measure except listening comprehension in April.

However, in comparison to the females, the males made significantly larger gains during the year in instructional level.

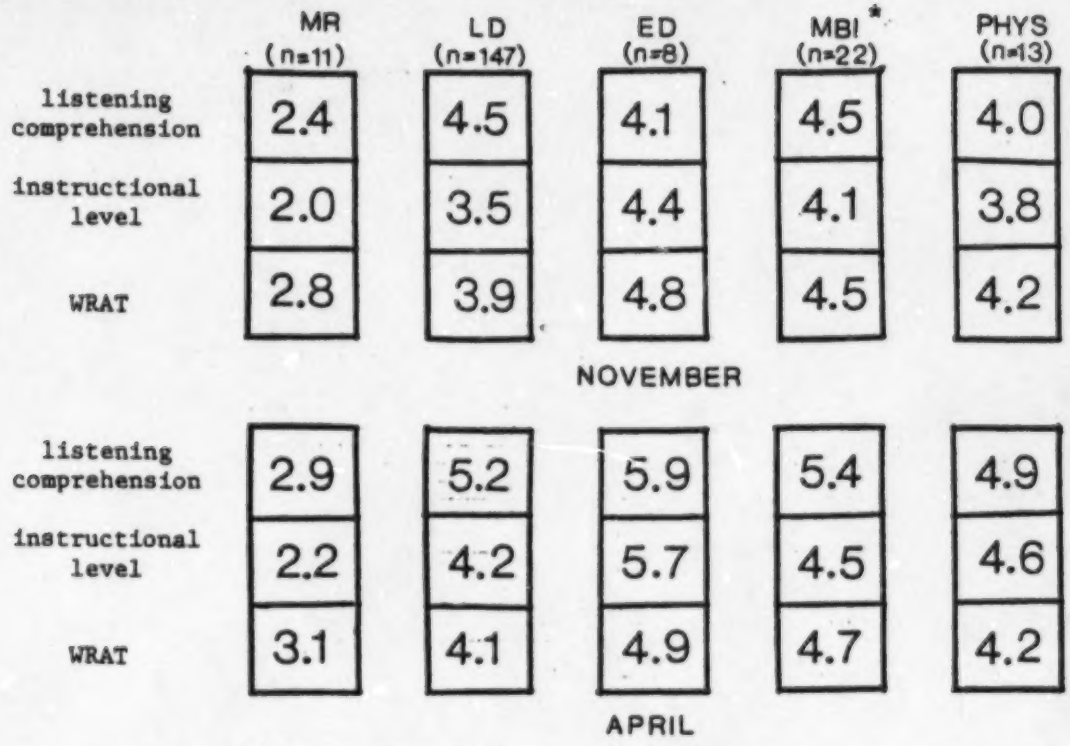

Figure 6: Mean grade equivalents for various handicapping conditions.

What was the reading achievement of students with various diagnostic labels?

(MR=mentally retarded;
LD=learning disabled;
ED=emotionally disturbed
MBI=minimal brain injury*;
PHYS=physically handicapped)

Because of the grossly unequal sample sizes among the five handicapping conditions in the above figure, meaningful statements about statistically significant group differences are difficult to make.

However, the above data suggest:

- The MR group had the lowest scores on all three measures (this group also had the lowest IQ scores).
- The ED group appeared to make the biggest gains in instructional level during the year.
- The biggest gap between listening comprehension and instructional level scores occurred in the LD group.
- For all five groups, the WRAT did not indicate as much change over time as the instructional level scores.

* no longer used as a diagnostic category in AISD.

What are some cautions to remember in interpreting these data?

It is important to temper the interpretation of the data presented in this report with an awareness of some important limitations inherent in the data.

- Special Education students present a unique challenge to the investigator seeking to assess their academic skills in a precise, reliable manner. It is important to remember that the reliability and validity of these reading tests for this population—and the skills of the individual test administrators—are essentially unknown.

- The grade equivalents yielded by the McCracken Reading Inventory are not grade equivalents in the sense of being based on national norms. They are derived from "readability" indices which have been applied to the passages used in the test. Similarly, although the WRAT grade equivalents are based on national norms, the applicability of these norms for a group of Special Education students is unclear.

- The nature of the data discussed in this report is such that no statements about causality can be made. For example, it would be erroneous to infer that free lunch status "causes" a student to have lower or higher reading achievement.

- Because the project collected no information on teacher characteristics, a potentially important set of variables which may be significantly related to reading achievement has been necessarily ignored.

The above points are made in order to highlight the tentative nature of the information presented in this report.

Technical Notes

This report contains several references to "significant" differences in reading achievement between various groups of students. Statements about significant differences are based on analyses of covariance, using a computer program described by Borich et al. (1976).

This program examines the heterogeneity of group regressions involving a dependent variable (in this case, post-test scores on the various reading measures) and a covariate (in this case, pretest scores on the same measures). If the regression lines are homogeneous, an analysis of covariance is calculated to test the main effect of groups (e.g., Resource vs. Integrated). Alpha levels were set at the .05 level.

In addition, several chi-square analyses were performed to determine whether certain demographic variables were statistically related. Again, alpha levels were set at the .05 level. Differences in mean IQ's between various groups of students were examined via t-tests (alpha=.05).

Copies of this interim report, along with copies of the computer printouts used in the analyses, are available from the Office of Research and Evaluation.

Reference

Borich, G., Godbout, R., & Wunderlich, K. The analysis of aptitude-treatment interactions: Computer programs and calculations. Chicago: International Educational Services, 1976.